UNITED
NATIONS

A

General Assembly

Distr.
GENERAL

A/CONF.151/PC/42/Add.9
11 July 1991

Original: ENGLISH

PREPARATORY COMMITTEE FOR THE UNITED NATIONS
CONFERENCE ON ENVIRONMENT AND DEVELOPMENT
Third session
Geneva, 12 August-4 September 1991
Working Group II
Item 2 of plenary and 4 (a) of Working Group II
of the provisional agenda

ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTE: OPTIONS FOR AGENDA 21

Report of the Secretary-General of the Conference

I. INTRODUCTION

1. This paper was prepared by the Secretariat in response to decision number 2/14 of the Preparatory Committee at its second session, in which the Secretary-General of the Conference was requested to elaborate further on the proposed areas for action identified in the progress report on "Environmentally sound management of hazardous waste" (ref. document A/CONF.151/PC/34) "... and report thereon to the Preparatory Committee at its third session".

2. The background paper on the "Environmentally sound management of hazardous waste" (A/CONF.151/PC/75) describes the principal issues related to hazardous waste management and attempts to identify constraints and gaps in knowledge. It reviews, current approaches and activities and provides the basis for the options for action in the present Agenda 21 paper.

GE.91-61832/3397B

II. OPTIONS FOR AGENDA 21

OVERALL OBJECTIVE

3. Within the "cradle to grave" framework, minimize the generation of hazardous wastes and close the hazardous waste cycle.

OVERALL TARGETS

4. (a) Minimization of the generation of hazardous wastes by reduction of the transboundary movements of hazardous wastes to a minimum consistent with the environmentally sound management of those wastes, and self-sufficiency in waste disposal.

(b) Ratification of the Basel Convention and the elaboration of related Protocols, mechanisms and guidelines to facilitate the implementation of the Convention.

PROPOSED PROGRAMME AREAS

5. The following major programmes are proposed as options to the Preparatory Committee:

A Promote waste prevention and minimization through "cleaner production" methods, through resource recovery, recycling, reclamation, direct re-use or alternative uses of wastes

B Enhance knowledge and information on economics of hazardous waste management

C Increase knowledge about environmental and health impacts of hazardous wastes

D Promote institutional capacities in hazardous waste management

E Strengthen international cooperation in monitoring transboundary movements of hazardous waste in particular the prevention of illegal traffic, and assessing environmental and health impacts of those movements.

A. PROMOTE WASTE PREVENTION AND MINIMIZATION THROUGH "CLEANER PRODUCTION" METHODS

Basis for action

6. Human health and environmental quality are being continually degraded by the increasing amount of waste being produced. One of the first priorities in waste management therefore is minimization as part of a broader approach, including pollution prevention and cleaner production strategies, industrial processes and consumer patterns.

7. Among the most important factors in these strategies is the recovery of wastes into useful material. Technology application, modification and development of new low waste technologies is therefore currently a central focus of waste minimization.

Objectives

8. The objectives of this programme are to:

(a) reduce to the extent feasible the generation of hazardous wastes; and,

(b) Where practicable and environmentally sound, utilize residues emanating from the production process optimizing use of raw materials.

9. The targets are:

(a) Integration of cleaner production approach and waste minimization in all planning, and adoption of specific quantitative targets by a target year;

(b) Establish an intermediate target for each country for the stabilization of the quantity of hazardous waste generated; and,

(c) Establish longer term targets for reducing the amount of hazardous waste produced per unit of manufacture.

Activities

10. Promote information collection and dissemination

- Governments, assisted by international organizations, could establish mechanisms for assessing the value of existing information systems.

- Governments could establish nationwide and regional information collection and dissemination clearinghouses and networks which are easy to access and use for Government institutions and industry.

- International organizations, especially through the UNEP Cleaner Production Programme and the ICPIC system, could extend and strengthen existing systems for collection of cleaner production information.

- Promote the use and dissemination by all United Nations agencies of information collected through the Cleaner Production network.

11. Technology development and research

- Government, academia and industry could significantly increase financial support for "cleaner technology R & D programmes", including the use of biotechnologies.

- Industry, with assistance from National Governments and international organizations, could promote research into the phase-out of hazardous processes and the reduction of raw materials and energy consumption.

- Industry could develop schemes to integrate the cleaner production approach into the design of products.

12. Development of management tools and practices

- Governments could modify existing standards or specifications for purchases to encourage energy and raw materials savings and to avoid discrimination against recycled materials.

- Governments could provide economic or regulatory incentives to stimulate industrial innovation and to encourage waste minimization investments.

- Industrial country Governments could provide a range of incentives including patent buying schemes to encourage industry to transfer technologies and know-how to developing countries. Industry could develop guidelines and codes of conducts leading to cleaner production through sectoral trade industry associations.

13. Promotion of education, training and public awareness

- Governments could increase support for industrial training programmes, incorporating waste minimization techniques and launching of demonstration projects at the local level to develop 'success stories' in cleaner production.

- Industry could integrate cleaner production principles and case examples into training programmes and establish demonstration projects/networks by sector/country.

- Non-governmental organizations and women's groups could develop cleaner production awareness campaigns and promote dialogue and partnership with industry and other actors.

14. Strengthening of institutional capacities including policies and planning

- Governments could incorporate into national planning and legislation an integrated approach to environmental protection driven by prevention and source reduction criteria and adopt waste reduction targets.

- Governments could work with industry on sector-by-sector waste minimization campaigns, including quantified targets for raw material and energy use, as well as the reduction of wastes and other emissions.

- Strengthen rational environmental impact assessment procedures to take into account the concept of "cradle to grave" approach for the management of hazardous wastes, to identify options for minimizing the generation of hazardous wastes, through safer, handling storage, disposal and destruction.

- Governments in collaboration with industry and appropriate international organizations could develop procedures for the monitoring of the application of the "cradle to grave" approach.

- Bilateral and multilateral development assistance agencies could substantially increase funding for cleaner technology transfer to developing countries including small- to medium-size enterprises.

B. ENHANCE KNOWLEDGE AND INFORMATION ON ECONOMICS OF HAZARDOUS WASTE MANAGEMENT

Basis for action

15. Due to the increasing amounts of hazardous wastes generated every year, there are increasing direct and indirect costs to the society and to the individual citizens in connection with its generation, handling and disposal. To improve knowledge of the economics, including impact on employment and environmental benefits of hazardous waste management, is therefore crucial that necessary capital investment be made available in development programmes.

Objectives

16. Harmonized international procedures for estimating the economics of hazardous waste management, taking into consideration the state of development of each country.

Activities

17. Develop and implement a programme aiming at increasing knowledge and information on the economics of waste management

- A relevant and competent international organization could take the lead, in cooperation with other organizations, in inter alia:

  (a) Developing guidelines for estimating the costs and benefits for various approaches to waste minimization and environmentally sound management of wastes.

  (b) Undertaking a comprehensive survey of and disseminate information on, experiences at national level in adopting economic regulatory schemes and incentive mechanisms for waste management.

C. INCREASE KNOWLEDGE ABOUT ENVIRONMENTAL AND HEALTH IMPACTS OF HAZARDOUS WASTES

Basis for action

18. Toxic substances have entered the environment endangering human health and threatening ecosystems, due to careless handling and disposal of hazardous wastes to address these problems, there is a need for increased knowledge on environmental contamination and pollution, the associated exposures of populations, especially women and children and ecosystems, due to hazardous waste, the assessment of risks and the intrinsic properties of wastes.

Objectives

19. The objectives are to:

(a) facilitate the assessment of impacts and risks of hazardous wastes on human health and the environment by establishing appropriate procedures, methodologies, criteria and/or standards;

(b) improve the knowledge regarding effects of hazardous wastes on health and the environment; and,

(c) make information available to governments and to the general public on the effects of hazardous waste on health and the environment.

Activities

20. Development of technologies for handling of hazardous wastes

- International organizations could identify relevant and improved technologies for handling, storage, treatment and disposal of hazardous wastes, and existing ones.

- International organizations could develop improved health-based criteria upon which regulations and standards can be established, and assist in the preparation of practical technical guidelines for safe handling and disposal of hazardous wastes.

21. Development of management tools and practices

- Governments could establish and maintain inventories of hazardous wastes and their treatment/disposal sites.

- Governments and international organizations could collaborate in developing easy to implement methods for characterization of hazardous wastes.

22. Information exchange and dissemination

- International organizations could facilitate and expand the dissemination of technical and scientific information dealing with the various health aspects of hazardous wastes, and to promote its application.

23. Promotion of education and training

- Governments and international organizations could collaborate in developing and disseminating educational materials concerning waste and their effects on environment and health for use in schools and by the general public.

- Governments could establish or strengthen programmes for environmentally sound management of hazardous wastes in accordance with health and environmental standards and extend surveillance systems to identify adverse effects on populations and the environment of exposure to hazardous wastes.

- International organizations could provide assistance to Member States for assessing the health and environmental risks, resulting from exposure to hazardous wastes and in identifying their priorities for controlling the various categories or classes of wastes.

D. PROMOTE INSTITUTIONAL CAPACITIES IN HAZARDOUS WASTE MANAGEMENT

Basis for action

24. Many countries lack the national capacity to handle and manage hazardous waste. This is primarily due to inadequate infrastructure, deficiencies in regulatory frameworks, insufficient training and education programmes and lack of coordination between the different ministries and institutions involved in various aspects of waste management. To ensure environmentally sound management of hazardous wastes one of the main priorities is to provide awareness, education and training programme to cover all levels of the society. In addition there is a need to undertake research programmes to understand the nature of hazardous materials, to identify their potential environmental effects and to develop technologies to safely handle these materials. Finally there is a need to strengthen the capacities of institutions which are responsible for the management of hazardous materials.

Objectives

25. Adoption of appropriate coordinating, legislative and regulatory measures at the national level supporting the environmentally sound management of hazardous waste including for the implementation of international conventions.

26. Public awareness and information programmes on hazardous waste issues and basic education and training programmes provided for industry and government workers in all countries.

27. Comprehensive research programmes on hazardous materials to be established in countries.

28. Strengthened service industries for handling hazardous materials and strengthened international networking.

29. Endogenous capacities to be established in all developing countries to train and educate staff at all levels in hazardous waste handling, monitoring and environmentally sound management.

Activities

30. Strengthening of research

- International organizations and donors could increase support for hazardous waste research management in developing countries.

- Governments, in collaboration with international organizations, could conduct research on the health effects of hazardous wastes in developing countries conditions including the long-term effects on children and women.

- Governments could conduct research aimed at the needs of small- and medium-sized industries.

- Industry, governments and international organizations could expand technological research on hazardous wastes handling, storage, transport, treatment and disposal and hazardous wastes assessment and management.

31. Strengthening of institutional capacities and infrastructures

Governments, international organizations and industry could as appropriate:

- Support national institutions for dealing with hazardous wastes from the regulatory monitoring and enforcement perspectives, including enabling them to implement international conventions.

- Develop industry-based institutions for dealing with hazardous wastes and service industries for handling hazardous wastes.

- Adopt technical guidelines for the environmentally sound management of hazardous wastes and support implementation of regional and international conventions.

- Develop and expand international networking, between professionals working in the hazardous wastes area and maintain an information flow among countries.

- Assess the feasibility of establishing and operating national, subregional and regional hazardous waste treatment centres. Such centres could also be used for education and training as well as to facilitate and promote the transfer of technologies for the environmentally sound management of hazardous wastes.

- Develop a programme for the establishment of national capacities to train and educate staff at various levels in hazardous waste management.

- Study the feasibility of establishing a revolving fund to assist, on an interim basis, in case of an emergency situation in minimizing damage from accidents arising from transboundary movements of hazardous wastes or during the disposal of these wastes.

32. Promotion of education, training and public awareness

Governments and international organizations and industry could:

- Increase public awareness and information on hazardous waste issues and promote the development and dissemination of public information on hazardous waste that is understandable to the general public.

- Develop training and education programmes for men and women in industry and government aimed at specific real-life problems, for example, planning and implementing waste minimization programmes, conducting hazardous materials audits or establishing appropriate regulatory programmes.

- Promote the transfer to developing countries of technologies on hazardous waste minimizing and handling through training for labour, industrial management, and government regulatory staff.

E. STRENGTHENING INTERNATIONAL CO-OPERATION IN MONITORING TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTE

Basis for action

33. To strengthen international cooperation in the monitoring of transboundary movements of hazardous wastes there is a need for harmonization of procedures and criteria used in various international and legal instruments. In this connection there is also a need to develop or harmonize existing criteria for identification of hazardous wastes dangerous to the environment and building monitoring capacities.

Objectives

34. To facilitate and strengthen international cooperation in the monitoring of transboundary movements of hazardous wastes by having internationally adopted criteria for identification and classification of hazardous wastes for the harmonization of relevant international legal instruments.

Activities

35. Harmonization of criteria and regulations

Governments and international organizations could cooperate as appropriate to:

- Incorporate the notification procedure called for in the Basel Convention as well as its Annexes I, II and III into national legislation.

- Cooperate in the formulation of regional agreements regulating transboundary movements of hazardous wastes such as the recently adopted Bamako Convention.

- Help promote the compatibility of such regional agreements with international conventions and protocols.

- Strengthen regional organizations capacities and capabilities to monitor transboundary movement of hazardous wastes.

- To set up monitoring and surveillance systems for the transboundary movements of hazardous wastes.

- Develop guidelines for the identification of hazardous wastes at the national level taking into account internationally agreed criteria and prepare a list of hazard profiles for the hazardous wastes listed in the national legislation.

- Develop and use appropriate methods for testing the hazardous wastes and adopt or adapt safety standards and principles for managing hazardous wastes in an environmentally sound way.

36. Adoption of normative measures

Governments and international organizations could collaborate to:

- Elaborate or adapt policies for the environmentally sound management of hazardous wastes in conformity with existing international instruments.

- Set up or adapt norms and regulatory measures to comply with the obligations and principles of the Basel Convention, the Bamako Convention or other future regional and international agreements including protocols for setting out appropriate rules and procedures in the field of liability and compensation for damage resulting from the transboundary movement and disposal of hazardous wastes and other wastes.